

**DEVICE FOR MEASURING CONCENTRATION OF COOLANT SOLUTION
AND SYSTEM FOR ADJUSTING COOLANT SOLUTION USING THE SAME**

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Abstract

PURPOSE: To provide a device for measuring the concentration of a coolant solution with which the accurate concentration is measurable and a system for adjusting the coolant solution using the same device. **CONSTITUTION:** An independent piping 12 for measuring the concentration is formed by branching it from a coolant piping 3a, a defoaming pump 13 and a concentration measuring chamber 14 where a stream is upward turned are provided and an ultrasonic concentration sensor 16 is installed here. Since the solution is defoamed with the defoaming pump 13, the concentration is accurately measured. The concentration measuring chamber 14 is provided with a cleaning piping 17 and the concentration sensor 16 is cleaned by flushing pure water in the piping at intervals. By combining this coolant solution concentration measuring device 11 with an oil replenishing means 31, a coolant liquid level measuring device and circuit for controlling the replenishment of pure water, the concentration and total amount of the coolant solution are adjusted so as to maintain them at prescribed values by a simple mechanism.

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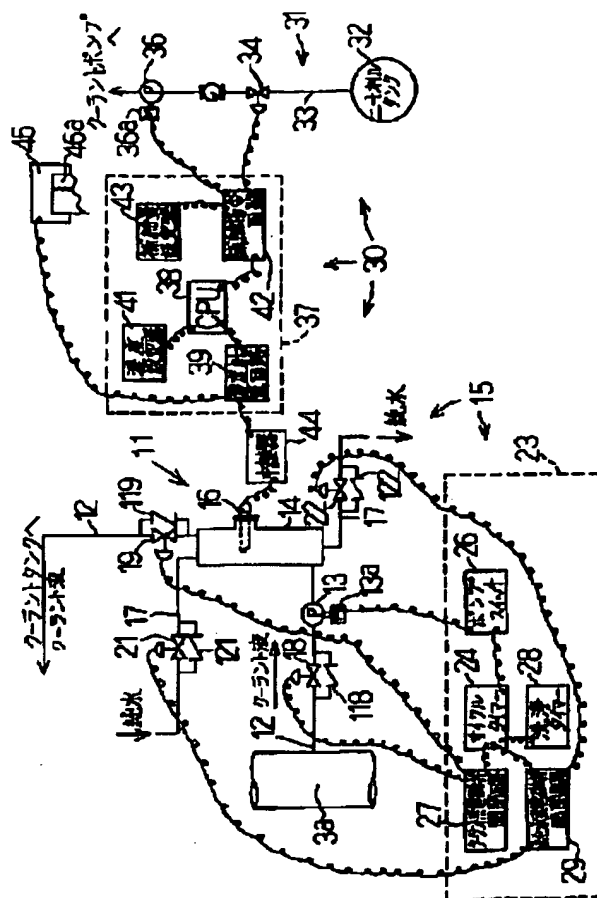
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TITLE : DEVICE FOR MEASURING
CONCENTRATION OF COOLANT
SOLUTION AND SYSTEM FOR
ADJUSTING COOLANT SOLUTION
USING THE SAME



ABSTRACT : PURPOSE: To provide a device for measuring the concentration of a coolant solution with which the accurate concentration is measurable and a system for adjusting the coolant solution using the same device.

CONSTITUTION: An independent piping 12 for measuring the concentration is formed by branching it from a coolant piping 3a, a defoaming pump 13 and a concentration measuring chamber 14 where a stream is upward turned are provided and an ultrasonic concentration sensor 16 is installed here. Since the solution is defoamed with the defoaming pump 13, the concentration is accurately measured. The concentration measuring chamber 14 is provided with a cleaning piping 17 and the concentration sensor 16 is cleaned by flushing pure water in the piping at intervals. By combining this coolant solution concentration measuring device 11 with an oil replenishing means 31, a coolant liquid level measuring device and circuit for controlling the replenishment of pure water, the concentration and total amount of the coolant solution are adjusted so as to maintain them at prescribed values by a simple mechanism.

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